# OWNER'S MANUAL
## *Model Number*

***700722 Subframe with Winch***
***700723 Northeast Drive Mechanism***

# *BERCO*
# *Subframe with Electric Lift & Drive Mechanism*
***for***
# *CUB CADET 2000 SERIES*
***Tractors***

*** ASSEMBLY**
*** OPERATION**
*** REPAIR PARTS**
*** MAINTENANCE**

## CAUTION:
**READ & FOLLOW ALL SAFETY RULES & INSTRUCTIONS BEFORE OPERATING YOUR EQUIPMENT**

# LIMITED WARRANTY

**Conditions and Products Covered:**

BERCOMAC guarantees any part of the product or accessory manufactured by BERCOMAC and found in the reasonable judgment of BERCOMAC to be defective in material and or workmanship will be repaired or replaced by an authorized dealer without charge up to our maximum labor rates and pre-established times. For replacement parts only standard ground freight services are covered. This warranty extends to the original retail purchaser only and is not transferable to any subsequent purchasers. This warranty applies to the products bought and used in North America.

**Warranty Period**

(from date of the original retail purchase)

- Residential use: 1 year
- Semi-commercial, professional or rental use: 90 days

**Exceptions Noted Below;** the following items are guaranteed by the original manufacturer and have their own warranty, conditions and limited time:

- Tire Chains: 90 days
- Engines: Will vary as per the manufacturer
  Please refer to the engine manufacturer's warranty statement included with the unit. BERCOMAC is not authorized to handle warranty adjustments on engines.

**Items and Conditions NOT Covered:**

This warranty does not cover the following:

- Pick-up or delivery charges or in-home services fees.
- Any damage or deterioration of the unit, parts and or finish of these due to normal use, wear and tear, or exposure.
- Cost of regular use or maintenance service or parts, such as gas, oil, lubricants, tune-up parts, and adjustments.
- Any part or accessory which has been altered, modified, misused, neglected, accidentally damaged or not properly installed, maintained, stored or repaired not in accordance with the instructions in the owner's manual.
- Repair due to normal wear and or any wear items such as shear pins, bolts, belts, etc.
- Expedited freight fee services for replacement parts.
- Shear bolts and shear pins are to be considered as a preventive measure not as an assured protection, any damages resulting from the lack of shear bolts breakage are not covered.
- Damages due to product being installed on a vehicle other than stipulated in owner's manual.

NOTE: All warranty work must be performed by an authorized dealer using original (manufacturer) replacement parts.

**Owner's Responsibilities:**

BERCOMAC's defective equipment or part must be returned to an authorized dealer within the warranty period for repairs. In the event that defective merchandise must be returned to manufacturer for repairs, freight fees are prepaid and a written authorization from BERCOMAC must be obtained by dealer prior to the shipment. This warranty extends only to equipment operated under normal conditions. To validate a warranty claim, it is the user's responsibility to maintain and service the unit as specified in the owner's manual or to have the unit serviced at their dealer at their expense.

**General Conditions:**

The sole liability of BERCOMAC with respect to this warranty shall be strictly and exclusively repair and replacement as mentioned herein. BERCOMAC shall not have any liability for any other costs, loss or damage, including but not limited to, any incidental or consequential loss or damage.
Taking advantage of the warranty does not in any way extend the length or renewal of the warranty.

In particular, without being limited to, BERCOMAC shall have no liability or responsibility for:

- Travel time, overtime, after hours time or other extraordinary repair charges or relating to repairs and or replacements outside of normal business hours.
- Rental of like or similar replacement equipment during the period of any, repair or replacement work.
- Any communicating or travel charges.
- Loss or damage to person or property other than that covered by the terms of this warranty.
- Any claims for lost revenue, lost profit or any similar costs as a result of damage or repair.
- Attorney's fees.

BERCOMAC's responsibility in respect to claims is limited to making the required repairs or replacement without charge up to our maximum labor rates and pre-established times and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any product or accessory.
In no event recovery of any kind be greater than the amount of the purchase price of the product sold.

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

**NOTE:** Bercomac reserves the right to change or improve the design of any part or accessory without assuming any obligation to modify any product previously manufactured.

**Instructions for Obtaining Warranty Services:**

Contact dealer where equipment was purchased or any other BERCO service dealer to arrange service at their dealership. Requests for warranty claims must be carried out through the same distribution network used to purchase the product.. Don't forget to bring your proof of purchase (sales receipt) to the BERCOMAC dealer.

Bercomac Limitée
92, Fortin North, Adstock, Quebec, Canada, G0N 1S0

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# INTRODUCTION

**TO THE PURCHASER**

This new accessory was carefully designed to give years of dependable service. This manual has been provided to assist in the safe operation and servicing of your attachment.

**NOTE:** All photographs and illustrations in the manual may not necessarily depict the actual models or attachment, but are intended for reference only and are based on the latest product information available at the time of publication.

Familiarize yourself fully with the safety recommendations and operating procedures before putting the machine to use. Carefully read, understand and follow these recommendations and insist that they be followed by those who will use this attachment.

**THIS SAFETY ALERT SYMBOL IDENTIFIES AN IMPORTANT SAFETY MESSAGE IN THIS MANUAL THAT HELPS YOU AND OTHERS AVOID PERSONAL INJURY OR EVEN DEATH. DANGER, WARNING, AND CAUTION ARE SIGNAL WORDS USED TO IDENTIFY THE LEVEL OF HAZARD. HOWEVER, REGARDLESS OF THE HAZARD, BE EXTREMELY CAREFUL.**

**DANGER:** **Signals an extreme hazard that will cause serious injury or death if recommended precautions are not followed.**

**WARNING:** **Signals a hazard that may cause serious injury or death if the recommended precautions are not followed.**

**CAUTION:** **Signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed.**

Record your attachment serial number and purchase date in the section reserved below (there is no serial number on the subframe). Your dealer requires this information to give you prompt, efficient service when ordering replacement parts. Use only genuine parts when replacements are required.

If warranty repairs are required please present this registration booklet and original sales invoice to your selling dealer for warranty service.

**This manual should be kept for future reference.**
**Please check if you have received all the parts for your kit with the list of the bag and the list of the box.**

**SERIAL NUMBER :** _____
**(IF APPLICABLE)**

**MODEL NUMBER:** _____

**PURCHASE DATE :** _____

# SAFETY PRECAUTIONS

Careful operation is your best insurance against an accident. Read this section carefully before operating the vehicle and accessory. This accessory is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury. All operators, no matter how experienced they may be, should read this and other manuals related to the vehicle and accessory before operating. It is the owner's legal obligation to instruct all operators in safe operation of the accessory.

**GLOSSARY:**

In this manual, right and left sides are determined by sitting on the seat of the vehicle facing forward.

In this manual, "accessories" means attachments (snowblower, rotary broom, blade etc.) that you install on the vehicle (lawn tractors, A.T.V. s etc).

**TRAINING:**

This symbol, "Safety Alert Symbol", is used throughout this manual and on the accessory's safety labels to warn of the possibility of serious injury. Please take special care in reading and understanding the safety precautions before operating the vehicle and accessory.

1. Read this owner's manual carefully. Be thoroughly familiar with the controls and proper use of the vehicle and accessory. Know how to stop the unit and disengage the controls quickly.

2. Never allow children to operate the vehicle nor the accessory. Never allow adults to operate the vehicle nor the accessory without proper instructions.

3. No one should operate the vehicle nor the accessory while intoxicated or while taking medication that impairs the senses or reactions.

4. Keep the area of operation clear of all people, particularly small children and pets.

**PREPARATION:**

1. Thoroughly inspect the area where the accessory is to be used and remove door mats, all foreign objects and the like.

2. For motorized accessories, disengage all clutches and shift into neutral before starting engine.

3. Do not operate the accessory without wearing adequate winter outer garments. Avoid loose fitting clothing that can get caught in moving parts. Wear footwear that will improve footing on slippery surfaces.

4. Handle fuel with care, it is highly flammable.

   a) Use approved fuel container.
   b) Never add fuel to a running engine or hot engine.
   c) Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors.
   d) Never fill containers inside a vehicle, or on a truck or a trailer bed with a plastic liner. Always place containers on the ground, away from your vehicle, before filling.
   e) When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
   f) Keep the nozzle in contact with the rim of the fuel tank or container opening at all times, until refueling is complete. Do not use a nozzle lock-open device.
   g) Replace fuel cap securely and wipe up spilled fuel.
   h) If fuel is spilled on clothing, change clothing immediately.

5. Never attempt to make any adjustments while the engine (motor) is running (except when specifically recommended by manufacturer).

6. Let the vehicle and accessory adjust to outdoor temperatures before using.

7. Never use an accessory without proper guards, plates, or other safety protective devices in place

8. Always make sure to wear the appropriate safety equipment required (glasses, muffs, mask…) for each type of product. See operation section.

9. Always make sure of having safe traction on the vehicle by using the recommended accessories (chains, A.T.V. tracks, counterweights…). See operation section.

10. Always make sure the all components are correctly installed. (driveline securely attached and locked at both ends, belts properly installed…)

11. Always handle the winch cable with thick leather gloves.

12. **Never modify the accessory or any part without the written consent from the manufacturer.**

# SAFETY PRECAUTIONS

**OPERATION:**

1. Do not put hands or feet near, under or inside rotating parts.
2. Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
3. After striking a foreign object, stop the engine (motor), disconnect the wire from the spark plug(s) and keep wire away to prevent accidental starting. Thoroughly inspect the accessory for any damage and repair damage before restarting and using the accessory.
4. If the unit should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause. Vibration is generally a warning of trouble.
5. Take all possible precautions when leaving the vehicle unattended. Disengage the power take-off, lower the attachment, place the transmission into neutral, set the parking brake, stop the engine and remove the ignition key.
6. Do not run the engine indoors, except when starting the engine and for transporting in or out of the building. Do not operate or let motor run in a storage area without ventilation because gas contains carbon monoxide which is odorless, colorless and can cause death.
7. Never use the accessories across the face of slopes, go from top to bottom. Exercise extreme caution when using equipment on slopes. Do not attempt to clear a steep slope.
8. Never tolerate bystanders in the working zone. Never use an accessory in the direction of bystanders, it might throw gravel or debris that can hurt people or damage property.
9. Never operate the accessory at high transport speeds on slippery surfaces. Use care when backing up.
10. Do not carry passengers.
11. Disengage power to the accessory when it is transported or not in use.
12. Never operate the accessory without good visibility or light.
13. Keep the accessory away from heat sources or flames.
14. If applicable, never handle the winch cable or hook while in tension.

**MAINTENANCE AND STORAGE**

1. When cleaning, repairing or inspecting the vehicle and accessory: stop the engine, set brake, remove ignition key, and wait that all moving parts have stopped. For gasoline engine, disconnect wire from the spark plug(s) and keep wire away to prevent accidental starting.
2. Check all the bolts and components at frequent intervals to make sure that they are properly tightened.
3. Never store a motorized accessory with fuel in the fuel tank inside a building where ignition sources are present such as hot water and space heaters, clothes dryers, and the like. Allow the engine to cool before storing in any enclosure.
4. Always refer to the owner's manual when you store the accessory and vehicle for a prolonged or an unspecified length of time.
5. Maintain or replace safety and instruction labels, as necessary.

6 For winter accessories, (if applicable), let the engine run for a few minutes after clearing snow in order to prevent the rotary parts from freezing.

7. Inspect the vehicle's and accessory's air filter (if applicable) every day. Clean it or replace it as necessary. Change the oil more often when working in dusty conditions. See the vehicle's and accessory's owner's manual.

**TRANSPORT**

1. Review Transport Safety instructions in vehicle manual before moving.
2. Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.
3. Make sure all lights and reflectors that are required by the local highway and transport authorities (exemple : SMV (Slow Moving Vehicle)) are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.
4. Never have the equipment in operation during transport.
5. Always travel at a safe speed.

# SAFETY DECALS

**REPLACE IF DECALS ARE DAMAGED**
**SEE PARTS BREAKDOWN FOR DECAL LOCATION**

DECAL #105133

Failure to observe these instructions could lead to severe injury or death.
To avoid injury to hands or fingers:
-Always keep hands clear of rope hook loop, ,hook and fairlead opening during installation , operation and when spooling in or out.
-Always use extreme caution when handling hook and rope during spooling operations.
-Always wear heavy leather gloves when handling rope.
-Keep hands away from the hot surface.

# ASSEMBLY

**IMPORTANT: TORQUE ALL BOLTS ACCORDING TO TORQUE SPECIFICATION TABLE WHEN STATED: TIGHTEN FIRMLY.**

**THE WINCH KIT IS TO BE USED ONLY TO LIFT BERCO ACCESSORIES, ANY OTHER USE MAY CAUSE DAMAGE TO THE VEHICLE.**

This subframe may be used to install different attachments (see attachments page). Once installed, it may remain permanently on your vehicle.

**NOTE:**It is not necessary to remove mower deck at this step.

## INSTALLING THE REFLECTORS

***IMPORTANT***: **When operating the tractor with a front mount attachment, install the two red-colored adhesive reflectors on the rear vertical surface of the tractor's fender.**

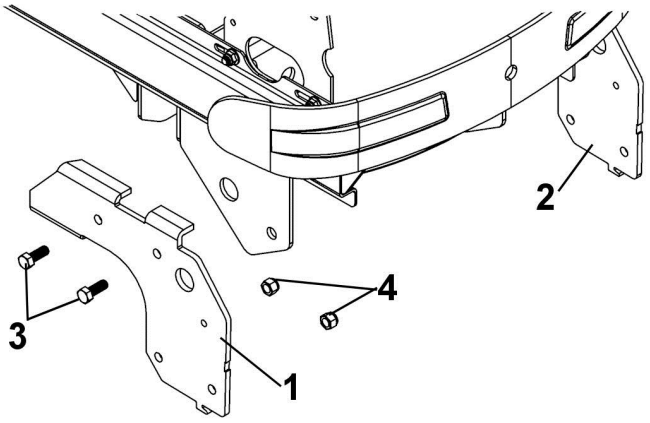
## TOOLS REQUIRED:

Wrenches: 5/16, 9/16, 10mm
Ratchet
Sockets: 7/16, 9/16, 3/4
Cutting pliers
Pliers
Square head screwdriver: #2
1 wrench (for the nuts on the battery posts of the vehicle).

## STEP 1
## SUBFRAME INSTALLATION:

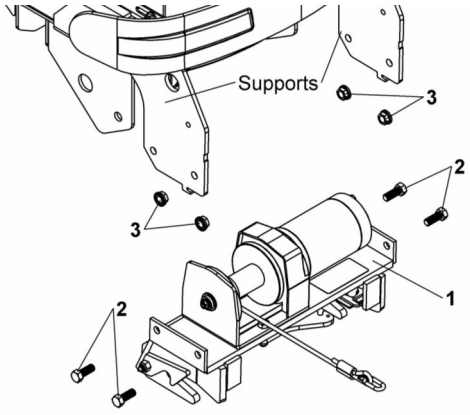
**Refer to parts breakdown section for parts identification.**

| Install the supports (items 1 & 2) on each side of the vehicle. | | |
|---|---|---|
| Item # | Description | Action |
| 1 & 2 | Support (qty 2) | Install on each side as shown. |
| 3 | Hex bolt 3/8'' x 1 1/4'' (qty 4) | Insert as shown. |
| 4 | Nylon insert lock nut 3/8'' (qty 4 ) | Insert on nuts. Do not tighten right away. |




Install the supports

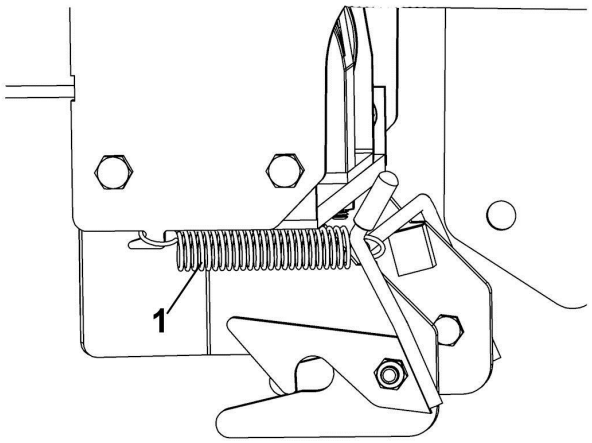
| Install the female hitch (item 1). | | |
|---|---|---|
| # Item | Description | Action |
| 1 | Female hitch | Install between the two supports. |
| 2 | Hex bolt 3/8 x 1'' (qty 4) | Insert as shown. |
| 3 | Flange nut 3/8'' (qty 4) | Tighten the all the bolts & nuts firmly. |




Install the female hitch between the two supports

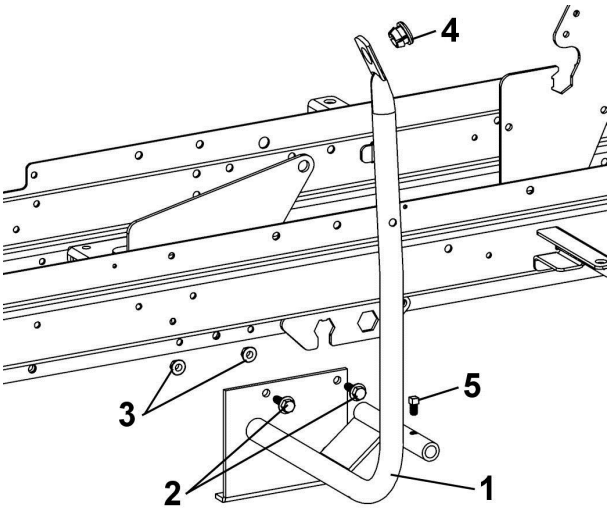
# ASSEMBLY

| Install the spring (item 1) | | |
|---|---|---|
| # Item | Description | Action |
| 1 | Spring | Install the spring on the frame as shown. |
| **NOTE**: The latch must move freely. | | |



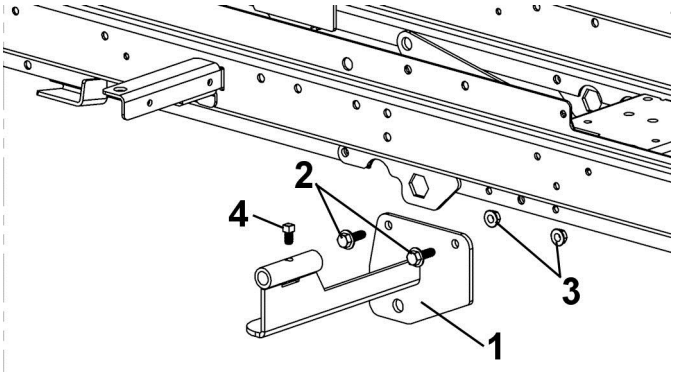

Install the spring as shown

| Install the handle support (item 1) on the left side. | | |
|---|---|---|
| # Item | Description | Action |
| 1 | Handle support | Install as shown. |
| 2 | Thread cutting screws 5/16'' x 1'' (qty 2) | Insert the screws as shown. |
| 3 | Flange nut 5/16'' (qty 2) | Tighten the nuts. |
| 4 | Plastic grommet | Insert as shown. |
| 5 | Square head set screw 5/16 x 1/2'' | Insert in the hole of the cab support as shown. |




Install the handle support

| Install the cab support (item 1) on the right side. | | |
|---|---|---|
| # Item | Description | Action |
| 1 | Cab support | Install as sown. |
| 2 | Thread cutting screws 5/16'' x 1'' (qty 2) | Insert the screws as shown. |
| 3 | Flange nut 5/16'' (qty 2) | Tighten the nuts. |
| 4 | Square head set screw 5/16 x 1/2'' | Insert in the hole of the cab support as shown. |

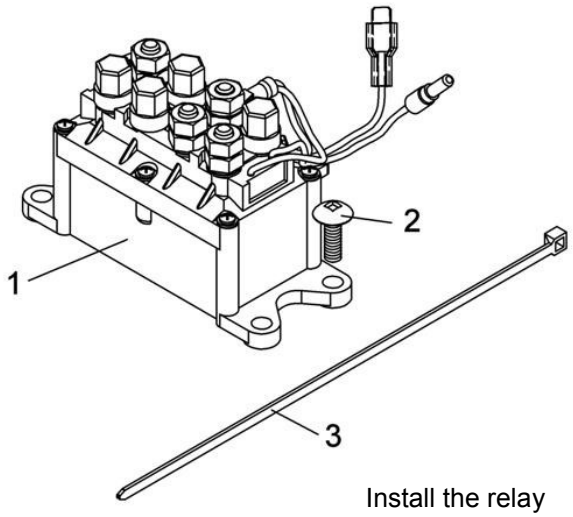



Install the cab support

# ASSEMBLY

## STEP 2:
## INSTALLATION OF THE WINCH CONTROL SWITCH

| Install the relay (item 1). | | |
|---|---|---|
| # Item | Description | Action |
| 1 | Relay | Install in an appropriate area. |
| 2 | Metal screw #12 x 3/4'' (qty 4) | Secure relay in place. |
| *3 | Nylon tie wrap 8'' (qty 4) | See * |
| *If necessary use the nylon tie wraps to secure the relay in place.<br>** Install in a sheltered place away from bad weather. | | |

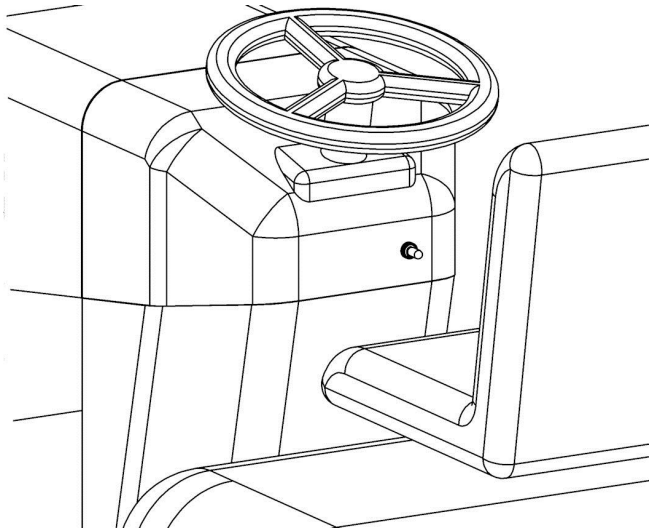



Install the relay

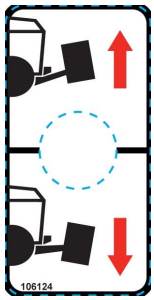
Before drilling the hole, check behind the dashboard to make sure there is enough space to install the switch.
Drill a 1/2'' hole in the dashboard or an appropriate place (see reference drawing). Stick the UP/DOWN decal over the hole for the switch.

Insert the switch in the hole and secure in place with the rubber boot.

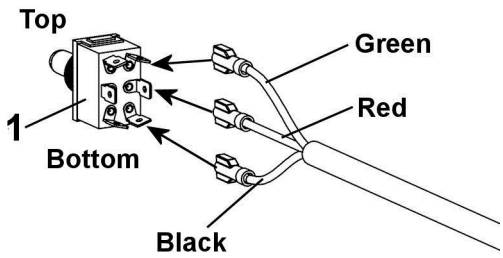
**NOTE:** It is important to install the switch vertically. Connect the wires as shown.
When the switch is raised, the winch must lift the accessory. If you prefer the contrary, invert the green and black wires.



Install the winch control switch




Up / Down decal




Connect the wires

**IMPORTANT**
To prolong the winch cable's life, release the winch control switch as soon as the accessory touches the ground. This will keep the cable from tangling up which causes premature wear.

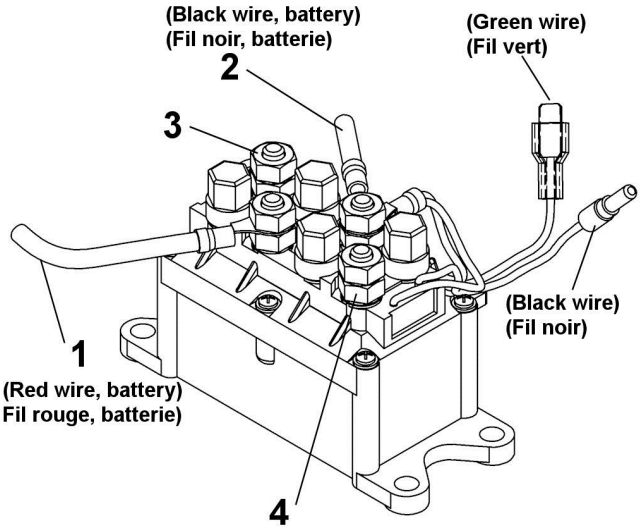
# ASSEMBLY

## CONNECTING THE WIRES

**NOTE:** The posts on the relay are identified by numbers. (1-2-3-4).

Install the wires from the winch on the posts of the relay.
Red wire (+) on post #3.
Black wire (-) on post #4.

Connect the red wire from the winch (limit switch) with the green wire from the relay.




Connect the wires

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## IDENTIFY THE IGNITION WIRE:

Place the clip of the Hi / Low tester on the negative post (-) on the battery or a metal surface without any paint.

Turn the ignition key to the position: Accessory.

Insert the tip of the tester in a hole at the back of the starter (switch) make sure to touch the metal part of the wire (on most tractors, it is the A1 terminal on the ignition switch that is used for accessories. Before connection, verify with HI/LOW tester).

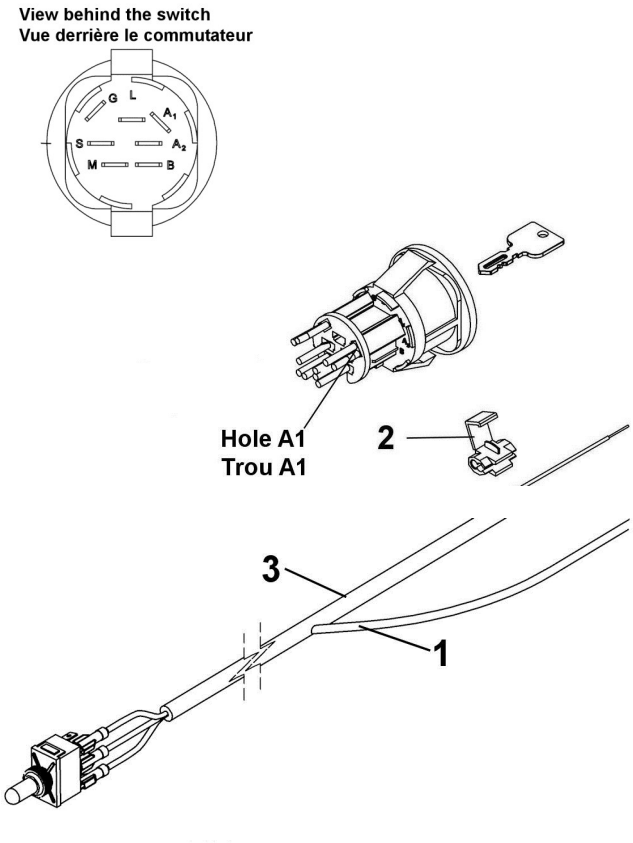
If the tester's light turns on, turn the ignition key to the position, Off. The light must turn off.
You have identified the ignition wire, if not repeat the operation on another wire.

## INSTALL THE CONTROL WIRE:

Join the ignition wire and the red wire from the winch control (item 1) with the instant connector (item 2).

Connect the black wire of the winch control (item 3) to the black wire on the relay.

Connect the green wire of the winch control (item 3) with the red wire of the winch (limit switch).



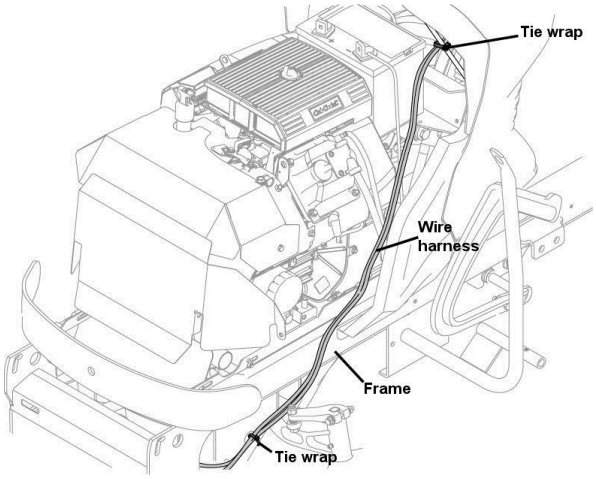

Connect the ignition wire

# ASSEMBLY

**TIE ALL THE WIRES:**

**NOTE:** Make sure the wires from the control assembly do not interfere with anything on the tractor nor come into contact with any heating, electrical or removable elements of the tractor. Keep clear of belts, exhaust and steering axel pivot.

Tie the wires with four nylon tie wraps included in the kit.



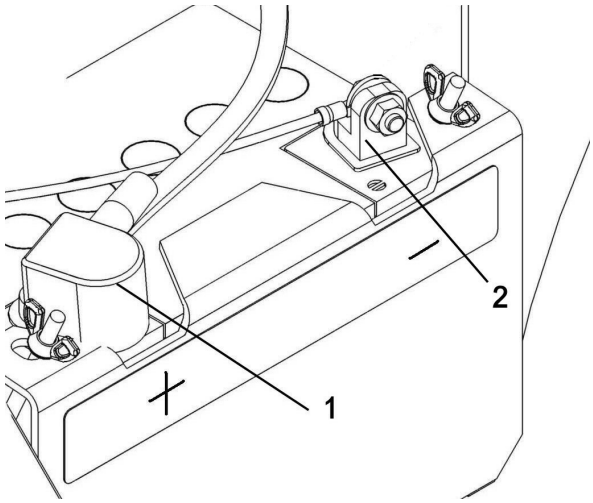

Tie the wires

**CAUTION**

**FOR YOUR SECURITY:**
**Read and follow the safety precautions for the battery in the vehicle's manual.**

**CONNECT THE WIRES ON THE BATTERY:**

Connect the wires from the relay to the vehicle's battery.
The red wire (+) on the positive post of the battery (item 1).
The black wire (-) on the negative post of the battery (item 2).
Make sure to tighten the nuts on the posts.

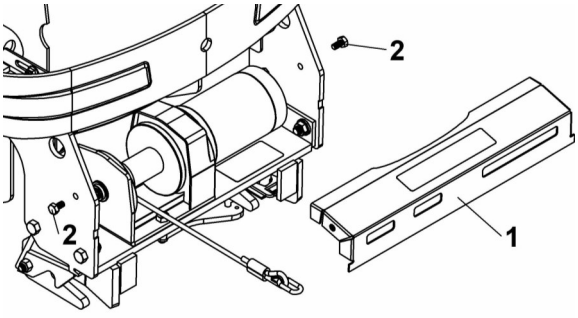



Connect the relay wires to the battery

| Install the heat shield (item 1). | | |
|---|---|---|
| # Item | Description | Action |
| 1 | Heat shield | Install as shown. |
| 2 | Hex bolts 1/4'' x 1/2'' (qty 2) | Tighten firmly. |

**VERY IMPORTANT:**

Make sure the cable winds up and unrolls as shown in the figure (cable under the spool).
**If the winch cable does not wind up from the bottom of spool as shown, the limit switch will not work and may cause damage to the subframe, winch and accessory.**




Install the heat shield

# ASSEMBLY

## STEP 3:
## DRIVE MECHANISM INSTALLATION:

**NOTE: You must remove mower deck to install the drive mechanism.**

**WARNING**

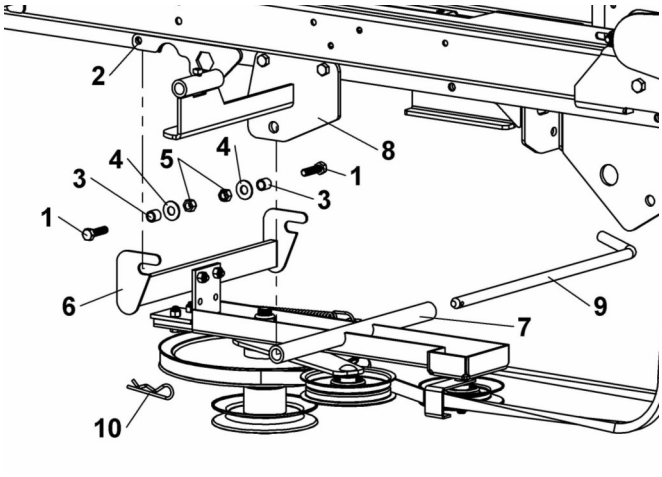
**TO PREVENT INJURIES:**
**Stop the motor.**
**Apply parking brake.**
**Remove the ignition key.**
**Disconnect the wire from the spark plug(s) and keep away from spark plug(s) to prevent accidental starting.**
**The muffler, exhaust pipe and surrounding areas will be HOT. Allow the tractor to cool before beginning preparation.**

Install the drive mechanism by inserting the 5/16'' x 1 1/4'' hex bolt (item 1) in the hole (item 2). On the inside of tractor frame, insert the spacer (item 3) and a flat washer (item 4) on the bolt and secure with a 3/8'' nylon insert lock nut (item 5). Do the same on other side of tractor.
Hook the rear portion of the drive mechanism (item 6) inside the tractor frame on the spacers previously installed. Install the front portion of the drive mechanism (item 7) between the supports (item 8) previously installed and secure in place with the pin (item 9) and hair pin (item 10) as shown.

**WARNING**

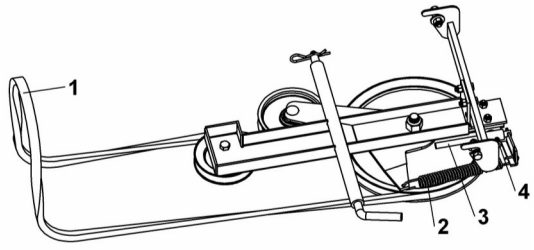
**TO PREVENT INJURIES:**
**It is the person who installs the drive mechanism responsibility to make sure that when the clutch is disengaged that all moving parts stop.**

**For more information, do not hesitate to contact the technical support.**




Install drive mechanism

Install the belt (item 1) on the engine pulley of the tractor. Check the tension on the spring (item 2). If necessary, adjust the tension by moving the adjustment rod (item 3) and tighten the sect screw (item 4).



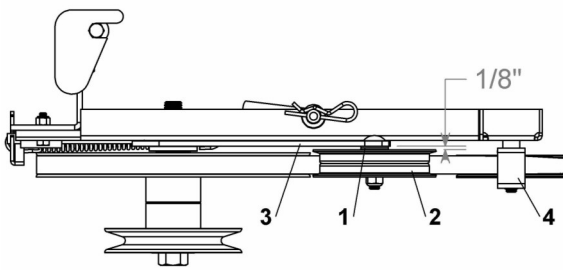

Belt routing

## VERIFICATION OF THE BELT AND PULLEY ALIGNMENT:

**WARNING**

**TO PREVENT INJURIES:**
**Do this verification when the engine of the vehicle is not running.**

Verify the belt and pulley alignment. If applicable, you can remove or add a flat washer (item 1) on the tension pulley (item 2) for a better adjustment.
**NOTE:** There should be a distance of 1/8'' between the tension arm (item 3) and the tension pulley.




Adjust the pulleys

# OPERATION & MAINTENANCE

## CAUTION

**Read the vehicle Owner's Manual carefully. Be thoroughly familiar with the controls & proper use of the attachment. Know how to stop the attachment quickly.**

**IMPORTANT:**
**THE WINCH KIT IS TO BE USED ONLY TO LIFT BERCO ACCESSORIES, ANY OTHER USE MAY CAUSE DAMAGE TO THE VEHICLE.**

## CONTROLS

**IMPORTANT:**
**In order to avoid draining the battery of the vehicle, always start the engine before using the winch**.

THE WINCH CONTROL SWITCH

Push up or down the winch control switch to lift or lower the accessory to the ground.
There is a limit switch stopper that limits the lifting.
Always prestretch cable and respool under load before installing the hook on the accessory. A tightly wound cable reduces chances of binding, which can cause damage to the cable.
To prolong the winch cable's life, release the winch control switch as soon as the accessory touches the ground. This will keep the cable from tangling up, causing premature wear of the cable.

## WINCH CABLE MAINTENANCE

To reduce the risk of cable failure during the season, we recommend changing the winch cable every year. Install the new winch cable as shown in figure in the parts breakdown.

## MAINTENANCE

a) Check mounting bolts at frequent intervals for proper tightness to be sure equipment is in safe working condition.

b) Apply oil at all pivot points.

c) To prolong the life span of the winch, make sure the limit switch works well.

## BELT REPLACEMENT

### Belt for the accessories:

**SEE ATTACHMENT OWNER'S MANUAL (SNOWBLOWER AND BROOM ) FOR REPLACING INSTRUCTIONS.**

**Drive Mechanism Belt:**

a) Remove the belt from the engine pulley.
b) Dismount the drive mechanism.
c) Remove the bolt which retains the tension pulley.
d) Replace the belt and re-install the tension pulley. Before tightening make sure the belt guide does not touch the belt at any time.
e) Re-install the drive mechanism.
f) Check the alignment of the belt that joins the drive mechanism to the engine pulley.

## VERIFY TIRE PRESSURE:

Tire pressure must be even on both sides of the tractor according the vehicle's owner manual.

# DISMOUNTING & STORAGE

## DISMOUNTING

**SEE ATTACHMENT OWNER'S MANUAL (SNOWBLOWER, BROOM AND BLADE) FOR DISMOUNTING INSTRUCTIONS.**

a) Dismount the attachment.
b) Remove the rear counterweight when you remove the front attachment (if applicable).
c) Remove the belt from the engine pulley.
d) Dismount the drive mechanism by supporting it in hand and removing the hair pin and the pin. Carefully lower to the ground. Remove the V-belt from engine pulley.
Pull out drive mechanism from underneath tractor.
e) You may leave the subframe on tractor all year long or remove it if preferred.
f) Reinstall mower if needed.

## STORAGE

a) Clean and paint all parts from which paint has worn.

b) Apply oil at all pivot points.

c) Inspect and replace all defective parts before using again.

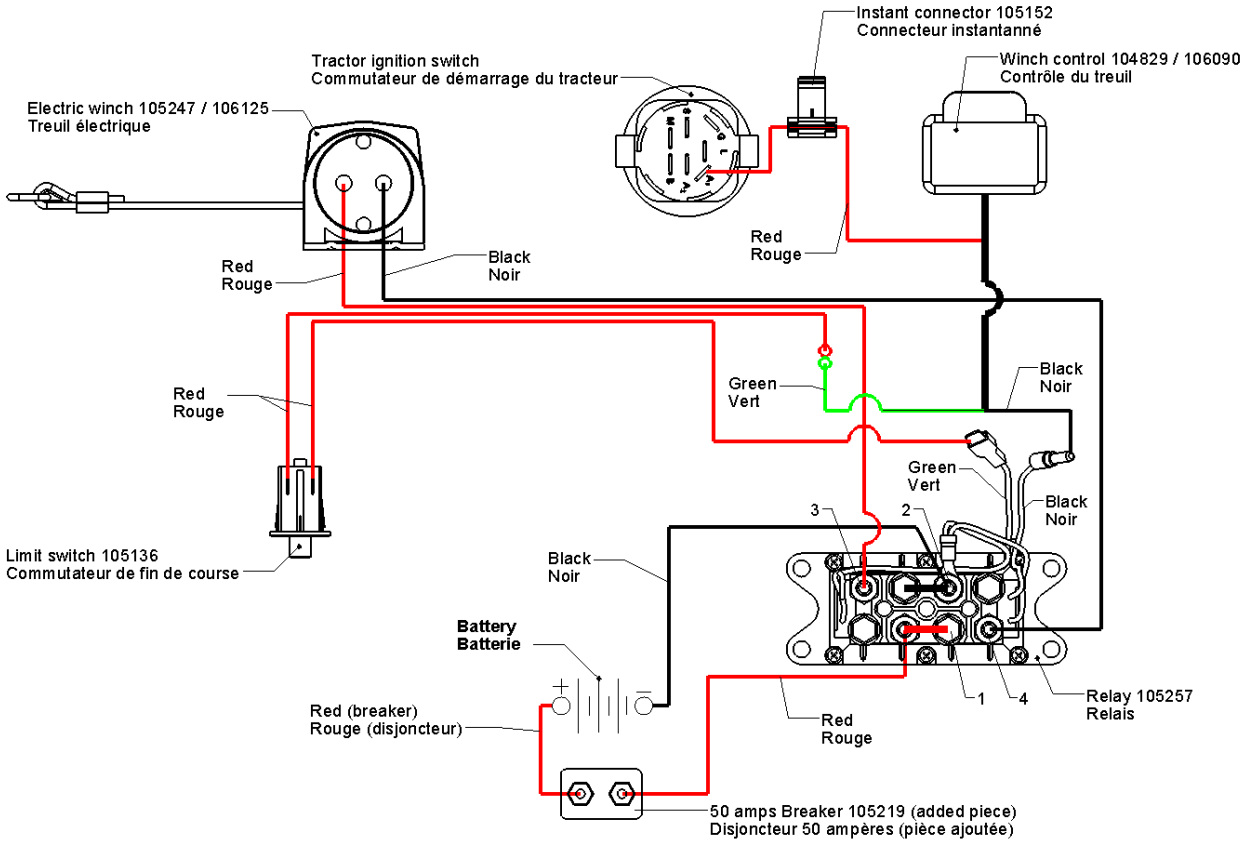
# TROUBLESHOOTING

*** Please refer to parts breakdown section for parts identification**.

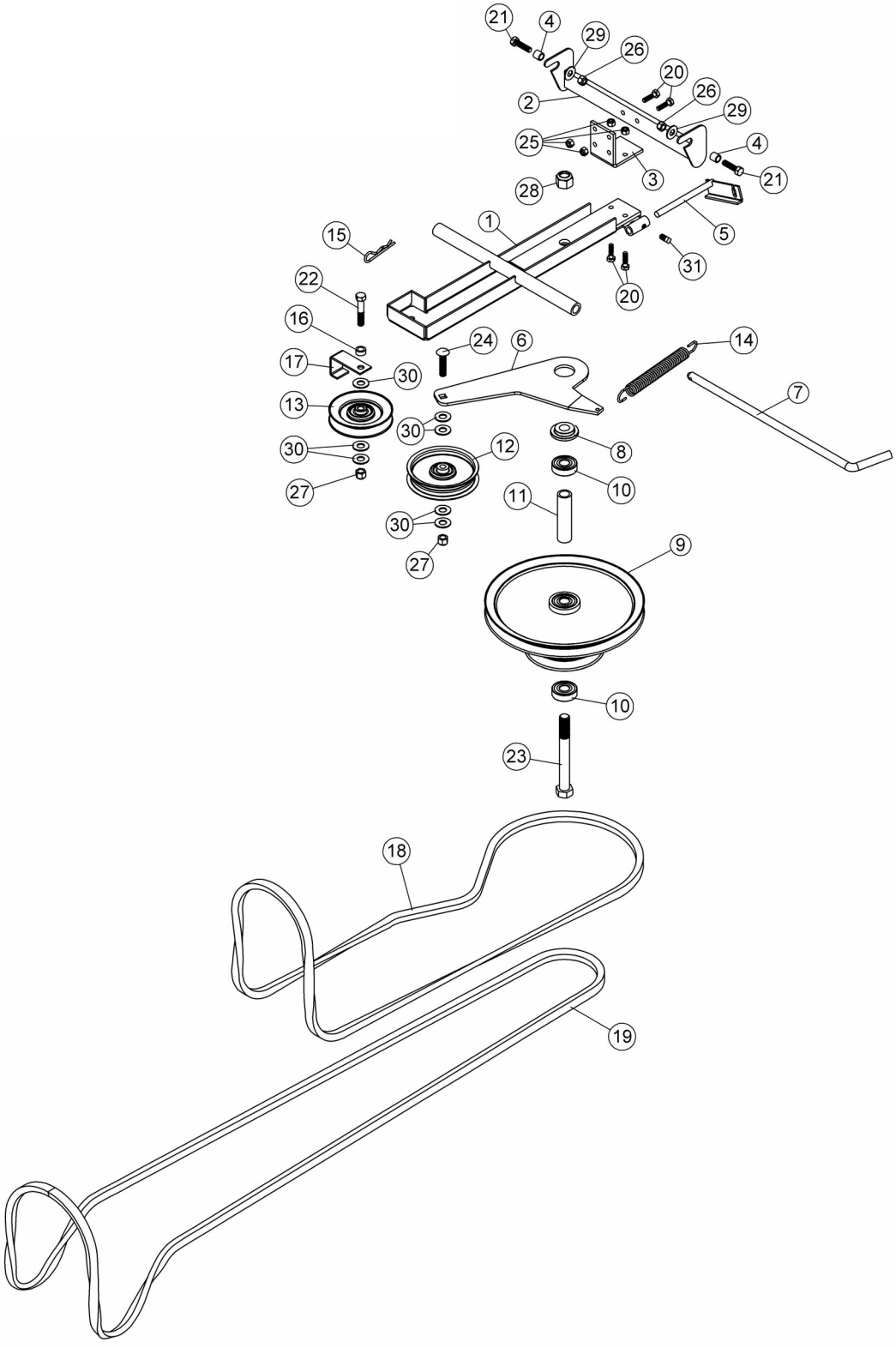
| PROBLEM | POSSIBLE CAUSES | CORRECTIVE ACTION |
|---|---|---|
| Winch runs backwards or stays stuck in up position. | Winch wires reversed. | Recheck wiring. |
| | Switch wires reversed. | Recheck wiring. |
| | Switch installed incorrectly. | Check switch installation. |
| | Battery wires reversed. | Recheck wiring. |
| | Winch cable is not winded up from the bottom of spool. | Wind winch cable from the bottom of the spool. (see assembly section in subframe manual) |
| Winch will not operate or runs in one direction only. | Vehicle's ignition switch is at OFF position. | Turn vehicle's ignition switch at ON position. |
| | Broken wires or bad connection. | Check for poor connections. |
| | Control switch is inoperative. | Replace control switch. |
| | Relay or breaker is damaged. | Replace the relay or breaker. |
| | Limit switch is damaged or wires disconnected from limit switch. | Replace limit switch or verify wire connections on limit switch. |
| | Winch is damaged. | Replace or repair winch. |
| Winch runs but with insufficient power or line speed. | Weak battery. | Recharge or replace battery. Check charging system |
| | Poor battery connection. | Check battery terminals for corrosion. Clean when required. |
| | Winch is damaged. | Replace or repair winch. |
| Winch cable breaking prematurely. | Frequently stopping the winch when accessory is going down. | Doing complete up and down cycles and avoid stopping midway. |
| | Cable tangling up. | Release the control switch as soon as the accessory touches the ground. |
| Winch drum and cable wearing prematurely. | Insufficient lubrication of winch drum and cable. | Lubricate winch drum and cable periodically with grease. |
| Winch does not hold the accessory in up position. | Winch is damaged. | Replace or repair winch. |

# TROUBLESHOOTING

| HOW TO KNOW | POINTS TO CHECK |
|---|---|
| Poor connections. | Recheck wiring with the owner's manual |
| HI/LOW voltage tester does not work. | Connect it on battery posts (+ and -) of a functional battery. If there is no light, the tester is damaged. |
| The control switch inoperative. | Test both connectors with HI/LOW voltage tester. If light comes ON or the relay is clicking in both positions (UP & DOWN), the control switch is operative. |
| Relay is damaged | If there is voltage on battery wire posts 1 & 2 on the relay and no voltage on posts 3 & 4 when control switch is activated and relay is clicking in both directions, the relay is defective. (see relay assembly section in owner's manual for relay post identification). Check connections with HI/LOW voltage tester. |
| Winch is damaged | The ultimate test is to connect the winch directly to the battery and reverse the wires to test both directions. If the winch doesn't work, it is damaged. |
| The limit switch is damaged. | When the limit switch is pushed or stuck inside, the winch can't raise the accessory, only lower it. If not working properly replace it. |
| The breaker is damaged. | Place clip of the HI / LOW voltage tester on negative (-) post of the battery. Check the voltage with the tip of the tester on both terminals of the breaker. If voltage only on 1 terminal replace the breaker. (sometimes it could take a few minutes for the breaker to automatically reset itself) |



# PARTS BREAKDOWN
## NORTHEAST DRIVE MECHANISM 700723

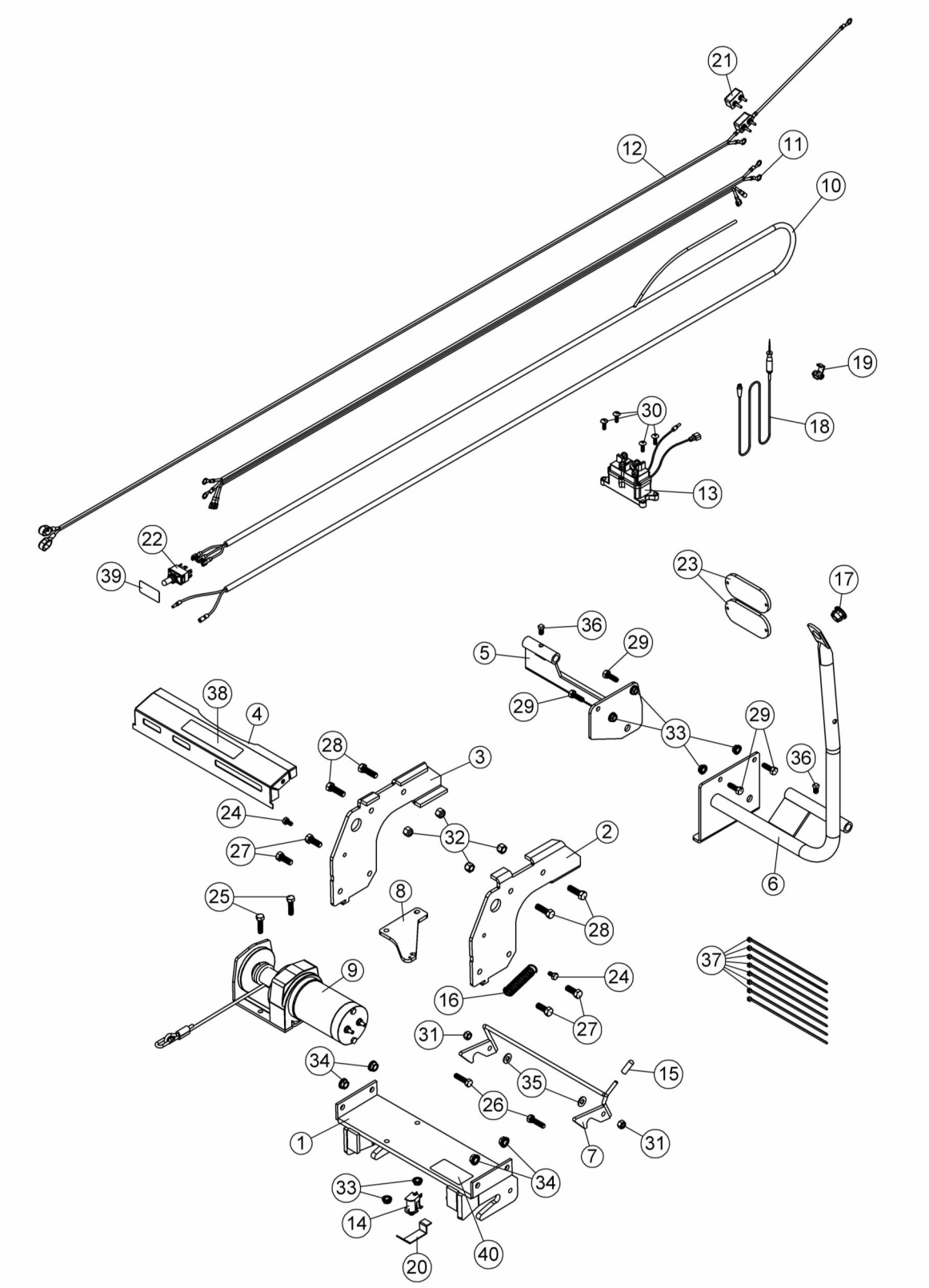


# PARTS LIST
## NORTHEAST DRIVE MECHANISM 700723

| Ref. Réf. | English description | Description française | Qty. Qté. | Part # Pièce # |
|---|---|---|---|---|
| 1 | Drive frame | Châssis d'entraînement | 1 | 107294 |
| 2 | Support | Support | 1 | 106070 |
| 3 | Bracket | Fixation | 1 | 106071 |
| 4 | Spacer | Espaceur | 2 | 106072 |
| 5 | Adjustment rod | Tige d'ajustement | 1 | 104841 |
| 6 | Idler arm | Bras de tension | 1 | 105208 |
| 7 | Pin | Goupille | 1 | 102754 |
| 8 | Flange washer | Rondelle à bride | 1 | 102969 |
| 9 | Double pulley | Poulie double | 1 | 107282 |
| 10 | Ball bearing | Roulement à billes | 2 | 102736 |
| 11 | Sleeve | Douille | 1 | 107333 |
| 12 | Flat pulley | Poulie plate | 1 | 102300 |
| 13 | V-Pulley | Poulie en V | 1 | 102766 |
| 14 | Spring | Ressort | 1 | 102304 |
| 15 | Hair pin 3mm | Goupille à ressort 3mm | 1 | 102617 |
| 16 | Sleeve | Douille | 1 | 106300 |
| 17 | Belt guide | Guide-courroie | 1 | 102840 |
| 18 | V-belt, B-100 (sb) | Courroie en v, B-100 (sb) | 1 | 103414 |
| 19 | V-Belt , B-124 | Courroie en V , B-124 | 1 | 102484 |
| 20 | Hex. bolt 1/4" n.c. x 1" GR5 | Boulon hex. 1/4" n.c. x 1" GR5 | 4 | O/L |
| 21 | Hex. bolt 5/16" n.c. x 1 1/4" GR5 | Boulon hex. 5/16" n.c. x 1 1/4" GR5 | 2 | O/L |
| 22 | Hex. bolt 3/8" n.c. x 2" GR5 | Boulon hex. 3/8" n.c. x 2" GR5 | 1 | O/L |
| 23 | Hex. bolt 5/8" n.c. x 5 1/2" GR5 | Boulon hex 5/8" n.c. x 5 1/2" GR5 | 1 | O/L |
| 24 | Carriage bolt 3/8" n.c. x 1 3/4 " GR5 | Boulon à carrosserie 3/8" n.c. x 1 3/4 " GR5 | 1 | O/L |
| 25 | Nylon Insert lock Nut 1/4" n.c. | Écrou à garniture de nylon 1/4" n.c. | 4 | O/L |
| 26 | Nylon Insert lock Nut 5/16" n.c. GR5 | Écrou à garniture de nylon 5/16" n.c. GR5 | 2 | O/L |
| 27 | Nylon Insert lock Nut 3/8" n.c. | Écrou à garniture de nylon 3/8" n.c. | 2 | O/L |
| 28 | Nylon Insert lock Nut 5/8" n.c. | Écrou à garniture de nylon 5/8" n.c. | 1 | O/L |
| 29 | Flat washer 3/8" hole | Rondelle plate 3/8" trou | 2 | O/L |
| 30 | Flat washer 7/16" hole | Rondelle plate 7/16" trou | 7 | O/L |
| 31 | Square head set screw 5/16" x 1/2" | Vis à pression à tête carré 5/16" x 1/2" | 1 | O/L |

**O/L = Obtain Locally**

# PARTS BREAKDOWN
## SUBFRAME 700722



# PARTS LIST
## SUBFRAME 700722

| Ref. Réf. | English description | Description française | Qty. Qté. | Part # Pièce # |
|---|---|---|---|---|
| 1 | Female hitch | Attache femelle | 1 | 106061 |
| 2 | Left support | Support gauche | 1 | 107292 |
| 3 | Right support | Support droit | 1 | 107293 |
| 4 | Heat shield | Pare-chaleur | 1 | 106064 |
| 5 | Cab support | Support de cabine | 1 | 106067 |
| 6 | Handle support | Support de manivelle | 1 | 106068 |
| 7 | Latch | Loquet | 1 | 106085 |
| 8 | Hitch plate | Plaque d'attache | 1 | 107154 |
| 9 | Winch assembly | Treuil assemblé | 1 | 106125 |
| 10 | Winch control wire | Fil du contrôle du treuil | 1 | 106103 |
| 11 | Wire assembly | Fil assemblé | 1 | 105256 |
| 12 | Wire assembly | Fil assemblé | 1 | 104831 |
| 13 | Relay | Relais | 1 | 105257 |
| 14 | Limit switch | Commutateur de fin de course | 1 | 105136 |
| 15 | Handgrip | Poignée | 1 | 104825 |
| 16 | Spring | Ressort | 1 | 103566 |
| 17 | Plastic grommet | Oeillet de plastique | 1 | 102063 |
| 18 | Hi/low voltage tester | Testeur de haute/basse tension | 1 | 105151 |
| 19 | Instant connector | Connecteur instantané | 1 | 105152 |
| 20 | Push plate | Plaque de poussée | 1 | 105150 |

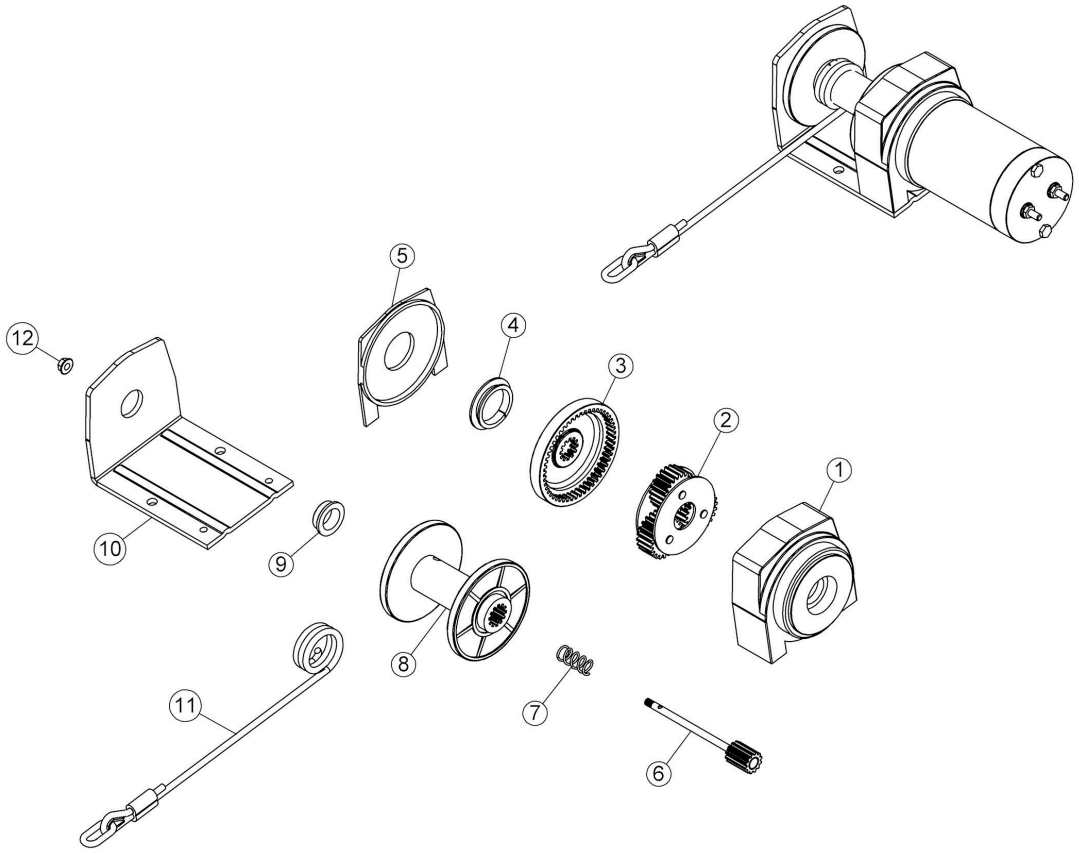
**O/L = Obtain Locally**

# PARTS LIST
## SUBFRAME 700722

| Ref. Réf. | English description | Description française | Qty. Qté. | Part # Pièce # |
|---|---|---|---|---|
| 21 | Breaker | Disjoncteur | 1 | 105219 |
| 22 | Winch control switch | Commutateur de contrôle du treuil | 1 | 106090 |
| 23 | Reflector (Pack of 2) | Réflecteur (Ensemble de 2) | 1 | 106108 |
| 24 | Hex. bolt 1/4" n.c. x 1/2" GR5 | Boulon hex. 1/4" n.c. x 1/2" GR5 | 2 | O/L |
| 25 | Hex. bolt 5/16" n.c. x 1 1/4" GR8 | Boulon hex. 5/16" n.c. x 1 1/4" GR8 | 2 | O/L |
| 26 | Hex. bolt 5/16" n.c. x 1 1/4" GR5 | Boulon hex. 5/16" n.c. x 1 1/4" GR5 | 2 | O/L |
| 27 | Hex. bolt 3/8" n.c. x 1" GR5 | Boulon hex. 3/8" n.c. x 1" GR5 | 4 | O/L |
| 28 | Hex. bolt 3/8" n.c. x 1 1/4" GR5 | Boulon hex. 3/8" n.c. x 1 1/4" GR5 | 4 | O/L |
| 29 | Thread cutting screw 5/16" n.c. x 1" | Vis a filetage coupante 5/16" n.c. x 1" | 4 | O/L |
| 30 | Metal screw T.H. #12" x 3/4" | Vis à métal T.H. #12" x 3/4" | 4 | O/L |
| 31 | Nylon Insert lock Nut 5/16" n.c. GR5 | Écrou à garniture de nylon 5/16" n.c. GR5 | 2 | O/L |
| 32 | Nylon Insert lock Nut 3/8" n.c. | Écrou à garniture de nylon 3/8" n.c. | 4 | O/L |
| 33 | Flange nut 5/16" n.c. | Écrou à bride 5/16" n.c. | 6 | O/L |
| 34 | Flange nut 3/8" n.c. | Écrou à bride 3/8" n.c. | 4 | O/L |
| 35 | Flat washer 5/16" hole | Rondelle plate 5/16" trou | 2 | O/L |
| 36 | Square head set screw 5/16" x 1/2" | Vis à pression à tête carré 5/16" x 1/2" | 2 | O/L |
| 37 | Tie wrap 8" | Attache de nylon 8" | 8 | O/L |
| 38 | Decal caution hot surfaces | Décalque attention surfaces chaudes | 1 | 105133 |
| 39 | Lift decal | Décalque de relevage | 1 | 106124 |
| 40 | Model number | Numéro de modèle | 1 | REF. |

**O/L = Obtain Locally**

# PARTS BREAKDOWN
## WINCH 106125




# PARTS LIST
## WINCH 106125

| Ref. Réf. | English description | Description française | Qty. Qté. | Part # Pièce # |
|---|---|---|---|---|
| 1 | Reduction box | Boîte de réduction | 1 | 105237 |
| 2 | Planetary gear | Engrenage planétaire | 1 | 105241 |
| 3 | Inner gear | Engrenage intérieur | 1 | 105239 |
| 4 | Drum support bushing | Coussinet du support de tambour | 1 | 105242 |
| 5 | Drum support plate | Plaque de support du tambour | 1 | 105243 |
| 6 | Spline shaft | Arbre à cannelures | 1 | 105246 |
| 7 | Spring | Ressort | 1 | 105245 |
| 8 | Drum | Tambour | 1 | 105238 |
| 9 | Bushing | Coussinet | 1 | 105240 |
| 10 | Base plate assembly | Plaque de base assemblée | 1 | 105244 |
| 11 | Winch cable | Cable du treuil | 1 | 106089 |
| 12 | Flange nut M6 x 1.00 | Écrou à bride M6 x 1.00 | 1 | O/L |

**O/L = Obtain Locally**

# TORQUE SPECIFICATION TABLE

## GENERAL TORQUE SPECIFICATION TABLE
## USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

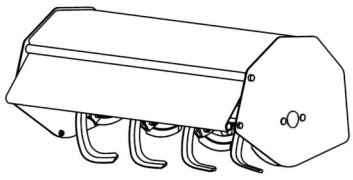
**NOTE:** These values apply to fasteners as received from supplier, dry or when lubricated with normal oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

*** Thick nuts must be used with grade 8 bolts**

| SEE Grade No. | | 2 | | | | 5 | | | | 8 * | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BOLT HEAD IDENTIFICATION MARKS AS PER GRADE NOTE MANUFACTURING MARKS WILL VARY | | TORQUE | | | | TORQUE | | | | TORQUE | | | |
| BOLT SIZE | | FOOT POUNDS | | NEWTON-METERS | | FOOT POUNDS | | NEWTON-METERS | | FOOT POUNDS | | NEWTON-METERS | |
| Inches | Millimetre | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 1/4" | 6.35 | 5 | 6 | 6.8 | 8.13 | 9 | 11 | 12.2 | 14.9 | 12 | 15 | 16.3 | 30.3 |
| 5/16" | 7.94 | 10 | 12 | 13.6 | 16.3 | 17 | 20.5 | 23.1 | 27.8 | 24 | 29 | 32.5 | 39.3 |
| 3/8" | 9.53 | 20 | 23 | 27.1 | 31.2 | 35 | 42 | 47.5 | 57 | 45 | 54 | 61 | 73.2 |
| 7/16" | 11.11 | 30 | 35 | 40.7 | 47.4 | 54 | 64 | 73.2 | 86.8 | 70 | 84 | 94.9 | 113.9 |
| 1/2" | 12.7 | 45 | 52 | 61 | 70.5 | 80 | 96 | 108.5 | 130.2 | 110 | 132 | 149.2 | 179 |
| 9/16" | 14.29 | 65 | 75 | 88.1 | 101.6 | 110 | 132 | 149.2 | 179 | 160 | 192 | 217 | 260.4 |
| 5/8" | 15.88 | 95 | 105 | 128.7 | 142.3 | 150 | 180 | 203.4 | 244.1 | 220 | 264 | 298.3 | 358 |
| 3/4" | 19.05 | 150 | 185 | 203.3 | 250.7 | 270 | 324 | 366.1 | 439.3 | 380 | 456 | 515.3 | 618.3 |
| 7/8" | 22.23 | 160 | 200 | 216.8 | 271 | 400 | 480 | 542.4 | 650.9 | 600 | 720 | 813.6 | 976.3 |
| 1" | 25.4 | 250 | 300 | 338.8 | 406.5 | 580 | 696 | 786.5 | 943.8 | 900 | 1080 | 1220.4 | 1464.5 |

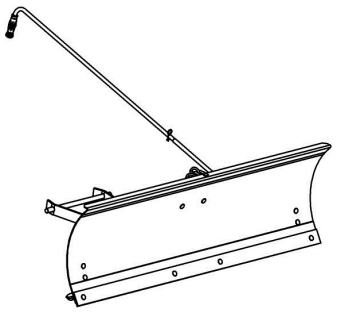
| METRIC BOLT TORQUE SPECIFICATIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | COARSE THREAD | | | FINE THREAD | | |
| Size Screw | Grade No. | Pitch (mm) | Foot Pounds | Newton-Meters | Pitch (mm) | Foot Pounds | Newton-Meters |
| M6 | 4T | 1.00 | 3.6 - 5.8 | 4.9 - 7.9 | - | - | - |
| | 7T | | 5.8 - 9.4 | 7.9 - 12.7 | | - | - |
| | 8T | | 7.2 - 10 | 9.8 - 13.6 | | - | - |
| M8 | 4T | 1.25 | 7.2 - 14 | 9.8 - 19 | 1.00 | 12 - 17 | 16.3 - 23 |
| | 7T | | 17 - 22 | 23 - 29.8 | | 19 - 27 | 25.7 - 36.6 |
| | 8T | | 20 - 26 | 27.1 - 35.2 | | 22 - 31 | 29.8 - 42 |
| M10 | 4T | 1.50 | 20 - 25 | 27.1 - 33.9 | 1.25 | 20 - 29 | 27.1 - 39.3 |
| | 7T | | 34 - 40 | 46.1 - 54.2 | | 35 - 47 | 47.4 - 63.7 |
| | 8T | | 38 - 46 | 51.5 - 62.3 | | 40 - 52 | 54.2 - 70.5 |
| M12 | 4T | 1.75 | 28 - 34 | 37.9 - 46.1 | 1.25 | 31 - 41 | 42 - 55.6 |
| | 7T | | 51 - 59 | 69.1 - 79.9 | | 56 - 68 | 75.9 - 92.1 |
| | 8T | | 57 - 66 | 77.2 - 89.4 | | 62 - 75 | 84 - 101.6 |
| M14 | 4T | 2.00 | 49 - 56 | 66.4 - 75.9 | 1.50 | 52 - 64 | 70.5 - 86.7 |
| | 7T | | 81 - 93 | 109.8 - 126 | | 90 - 106 | 122 - 143.6 |
| | 8T | | 96 - 109 | 130.1 - 147.7 | | 107 - 124 | 145 - 168 |
| M16 | 4T | 2.00 | 67 - 77 | 90.8 - 104.3 | 1.50 | 69 - 83 | 93.5 - 112.5 |
| | 7T | | 116 - 130 | 157.2 - 176.2 | | 120 - 138 | 162.6 - 187 |
| | 8T | | 129 - 145 | 174.8 - 196.5 | | 140 - 158 | 189.7 - 214.1 |
| M18 | 4T | 2.00 | 88 - 100 | 119.2 - 136 | 1.50 | 100 - 117 | 136 - 158.5 |
| | 7T | | 150 - 168 | 203.3 - 227.6 | | 177 - 199 | 239.8 - 269.6 |
| | 8T | | 175 - 194 | 237.1 - 262.9 | | 202 - 231 | 273.7 - 313 |
| M20 | 4T | 2.50 | 108 - 130 | 146.3 - 176.2 | 1.50 | 132 - 150 | 178.9 - 203.3 |
| | 7T | | 186 - 205 | 252 - 277.8 | | 206 - 242 | 279.1 - 327.9 |
| | 8T | | 213 - 249 | 288.6 - 337.4 | | 246 - 289 | 333.3 - 391.6 |

# ATTACHMENTS



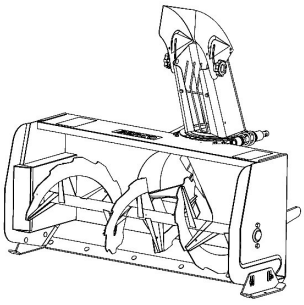
**ROTARY TILLER #700312**

**Mounts to the rear of lawn, yard & garden tractors 14 to 25 HP. Comes complete with drive & manual lift mechanisms & mounting hardware**

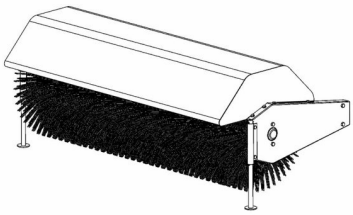


**BLADE #700463**

**Mounts on the same subframe as the snowblower & rotary broom.**

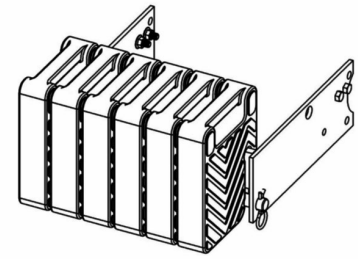


**SOUFFLEUSE**
**700474 44"**
**700478 48"**
**Mounts on the same subframe as the blade & rotary broom.**



**ROTARY BROOM**
**#700380 with nylon brush**
**#700381 with polypropylene brush.**

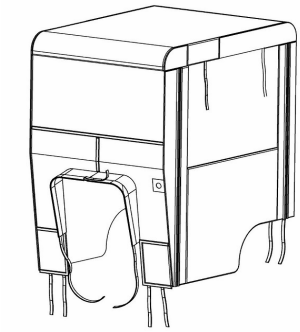
**Fits on same subframe as snowblower & utility blade. Requires an adaptor.**



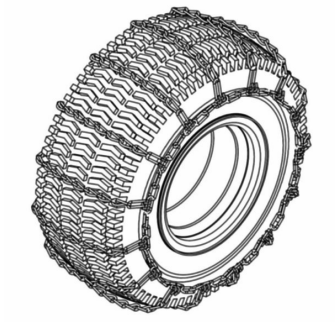
**COUNTERWIEGHT**

**# According to tractor model**

**Required for safety and traction. Counterbalances weight of attachment.**



**TRACTOR WINTER CAB**
**#700271 34"**
**#700423 40"**
**Universal type fits on a wide variety of lawn and garden tractors.**



**TIRE CHAINS**

**Two link spacing. Required for traction and safety.**
**Pkg. of 2**

# NOTES

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# *WHEN PERFORMANCE & DEPENDABILITY ARE NON NEGOTIABLE !*

**Bercomac Limitée**
**92, Fortin North, Adstock, Quebec, Canada, G0N 1S0**

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